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(54) 14 α -hydroxy-4-androstene-3,6,17-trione hydrate crystal and process for producing same

(57) Provided are stable hydrate crystals of 14 α -hydroxy-4-androstene-3,6,17-trione having a biological activity of human placenta-originating estradiene synthesis enzyme inhibitory action. These hydrate crystals include two kinds of 14 α -hydroxy-4-androstene-3,6,17-trione hydrate crystals having a diffraction pattern having characteristic peaks at diffraction angles in crystalline powder X-ray diffraction. Processes for producing these hydrate crystals are also provided.

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EUROPEAN SEARCH REPORT

Application Number
EP 94 10 7654

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 5)
A	EP-A-0 382 162 (SNOW BRAND MILK PROD CO LTD) 16 August 1990 * examples 2,3 *	1-4	C07J1/00 //A61K31/565
D,A	EP-A-0 300 062 (SNOW BRAND MILK PROD CO LTD) 25 January 1989 * figures 1,3; example 1 *	1-4	
A	PATENT ABSTRACTS OF JAPAN vol. 017, no. 394 (C-1088), 23 July 1993 & JP-A-05 076387 (SNOW BRAND MILK PROD CO LTD), 30 March 1993, * abstract * & DATABASE WPI Section Ch, Week 9317 Derwent Publications Ltd., London, GB; Class B01, AN 93-139581 & JP-A-05 076 387 (SNOW BRAND MILK PROD CO LTD), 30 March 1993 * abstract *	1-4	
A	PATENT ABSTRACTS OF JAPAN vol. 015, no. 227 (C-0839), 10 June 1991 & JP-A-03 068596 (SNOW BRAND MILK PROD CO LTD), 25 March 1991, * abstract * & DATABASE WPI Section Ch, Week 9118 Derwent Publications Ltd., London, GB; Class B01, AN 91-129147 & JP-A-03 068 596 (SNOW BRAND MILK PRODUCTS), 25 March 1991 * abstract *	1-4	TECHNICAL FIELDS SEARCHED (Int. Cl. 5) C07J
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 22 April 1996	Examiner Watchorn, P
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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EUROPEAN SEARCH REPORT

Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
A	CHEMICAL ABSTRACTS, vol. 111, no. 1, 3 July 1989 Columbus, Ohio, US; abstract no. 3930, M. YOSHIHAMA ET AL: "Microbial Production of two new dihydroxylated androstenedione derivatives by Acremonium strictum" page 380; column 2; XP002001152 * abstract * & J. FERMENT. BIOENG., vol. 67, no. 4, 1989, pages 238-243, ---	1-4	
A	P. D. KENNEWELL: "Comprehensive Medicinal Chemistry (The Rational Design, Mechanistic Study & Therapeutic Application of Chemical Compounds)" 1990, PERMAGON PRESS, OXFORD, GB XP002001151 * page 356 - page 359 * * in particular, page 356, paragraph 3.6.4.5.2 * -----	1-4	TECHNICAL FIELDS SEARCHED (Int.Cl.5)
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